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ABSTRACT

This document presents the 1992 research and service agendas for the National Center for Research in Vocational Education (NCRVE). It begins with NCRVE's mission statement. Part 1 contains research project descriptions. It sets forth the six issue areas into which NCRVE's research agenda is divided and then groups the descriptions into these areas. The issue areas are as follows: context, goals, planning, and evaluation; curriculum and instructional methods; vocational education for special populations; development of personnel in vocational education; delivery system of vocational education and training; and governance and policy. Part 2 discusses NCRVE's service functions. Descriptions are provided of these service activities: Advanced Study Center for Leadership Development: Facilitating and Evaluating Leadership Development Activities; Inservice Education; Technical Assistance for Special Populations Programs; Dissemination; Technical Assistance for Planning and Evaluation; and An Information Exchange on Tech Prep Programs. Each entry includes project title, project director, keywords, and description. An index of key words is appended. (YLB)

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MISSION STATEMENT

The overall mission of the National Center for Research in Vocational Education (NCRVE) is to engage in research and related activities designed to increase the access of all Americans, regardless of their aptitudes or abilities, to a high quality work life that is not only economically rewarding but also personally fulfilling. Increasing access to satisfying work depends, in part, on better understanding three important questions. First, what knowledge, skills, and attitudes are required to succeed in the workplace of today and tomorrow, and how are these changing? Second, how is this requisite knowledge best learned? Third, how can these abilities be used more productively in the workplace? Consequently, improving employment opportunities for all Americans is at once an interactive inquiry into what students need to know, how best to help them learn it, and how best to use this knowledge in the workplace. This is the inquiry that forms the basis for NCRVE's research and service agendas.

To guide its research, NCRVE relies primarily on pursuing inquiry in a broad range of problem areas and/or disciplines to understand how the work-related knowledge base is changing, how to use this knowledge base more effectively, and how to use education more effectively on the job. Although we are concerned with improving the employment prospects of all students, we are especially concentrating our efforts on lower ability students whom schools have traditionally underserved. Evidence to date suggests that we need to rethink how to structure education along with vocational education, and also to examine the disjunctures between how people work on the job and how they are expected to learn in schools.

Recent research on the changing nature of work, combined with the changing management of workplaces as well as growing evidence from employers shows that, for more and more workers, success depends increasingly on the ability to work in teams, to share information, to pass on skills, and to make connections across tasks and larger occupational domains. These are characteristics of horizontally managed workplaces which have addressed the related problems of productivity, worker autonomy, and worker morale. These are characteristics which are antithetical to hierarchically organized schools, which stress individual achievement, hoarding of information, teacher-proof curricula, minimum achievement levels, excessive supervision, and the mastery of discrete bodies of knowledge. The result is an inevitable win/lose game, where some students must always

be identified as more successful than others. As a consequence, behaviors encouraged in school bear little resemblance to behaviors needed to succeed in work.

Similarly, recent research in cognitive science reinforces long-held precepts that people learn best when abstract principles and concepts are presented in an experience relevant context, when new learning builds upon prior learning, when students move systematically from the familiar to the unfamiliar, and when there are opportunities to integrate a wide range of knowledge and skills. Unfortunately, many conventional approaches to education ignore these generalizations. Academic education is often delivered in complete isolation from vocational education. Within each of these curricula, there are artificial and arbitrary compartments for organizing the delivery of education into discrete academic enclosures or by narrowly defined occupational identities. The result is a curriculum so highly fragmented that it can be effectively mastered by only a portion of the most persistent and brightest of students.

What is known about how people learn and about how to effectively organize work requires a critical reexamination of how schooling and work are organized. Traditional paradigms which isolate vocational from academic education are likely to perpetuate a system that makes most knowledge accessible to a very few. Similarly, a failure to scrutinize the ways in which we have traditionally employed skilled labor or compensated for the lack of skills is certain to diminish American productivity and the quality of life available to everyone.

Therefore, the research and service agendas of NCRVE have been organized around the following objectives: (1) better understanding how work is changing and what these changes imply for increasing students' understanding of work opportunities and for improving the relationship between schools and workplaces; (2) identifying better educational strategies for preparing students for work; (3) improving the articulation between secondary and postsecondary and strengthening the capacity of postsecondary vocational education to respond to an increasingly diverse student body; and (4) improving the accountability of secondary and postsecondary education by (a) knowing what to count, (b) enhancing assessment practices, (c) improving methods for monitoring performance, and (d) linking performance to public policy. Each of these will be briefly elaborated upon.

First, we seek to understand how work and its organization is changing and how the nature of different occupations and requirements for success can be better communicated to students of all ages. Additionally, we seek to improve ways to incorporate information about work and work organization into the full range of secondary and postsecondary curricula, including exploring alternatives to traditional approaches to guidance and counseling. Moreover, we believe that there must be better two-way communication between employers and educators. Merely relying on employers to dictate skill needs to educators is not sufficient because opportunities for innovation may be lost. Consequently, NCRVE seeks ways to better use the knowledge of educators to reorganize work and improve the quality of work life.

Second, we are committed to identifying and evaluating new educational designs that are grounded in research and stand the greatest chance of making knowledge and skills more accessible to more students. A promising development, we believe, is the effort to integrate the vocational and academic curricula in secondary and postsecondary education. Integration, however, will require careful implementation and rigorous evaluation. It must include strategies that require change in both the vocational and academic curriculum. Not only should vocational education be infused with much greater academic content, but also the academic curriculum should be altered to take advantage of the benefits of practical applications and learning in a familiar context. To this end, NCRVE is committed to defining alternative models of integration, assessing their effectiveness, and building the capacity of the educational system to operate effective approaches.

Third, NCRVE will devote a substantial portion of its resources to improving articulation between secondary and postsecondary vocational education and to strengthening the capacity of the postsecondary vocational education enterprise. For a growing number of students, vocational education at the secondary level alone is unlikely to constitute sufficient preparation for work. Not only do more and more students not have sufficient time for vocational education in high school, but also more advanced preparation is required in many more fields. To ensure that high school students use their time in vocational education wisely, better articulation with postsecondary vocational education is essential. Additionally, as postsecondary students will continue to become increasingly diverse with respect to age, race, and skills and aptitudes, special attention must be paid to strengthening the capacity of postsecondary vocational education to meet these students' needs and to assure that there is articulation with secondary vocational education.

Fourth and finally, NCRVE is committed to improving public accountability in secondary and postsecondary vocational education. Achieving this aim will depend, in part, on finding better ways to understand what should be counted in order to assess students' progress and their accomplishments in vocational education. It will also depend on designing programmatic and institutional systems of accountability. These systems will need to be sensitive to the dominant structural features of secondary and postsecondary education, while at the same time promising better information on student and institutional outcomes for policymakers and other users of information about vocational education.

PART ONE

RESEARCH PROJECT DESCRIPTIONS

NCRVE's research agenda is divided into six issue areas, each of them consistent with NCRVE's original research agenda. The six issue areas are as follows:

I. Context, Goals, Planning, and Evaluation

This issue area examines the changing conditions of employment in order to understand better how the goals of vocational education and the skills taught should be changing. It contributes to refining the methodologies of evaluation and planning, so that information about the effectiveness of programs can be developed and then used to improve existing programs.

II. Curriculum and Instructional Methods

Once the goals of vocational programs have been established, curriculum and instructional methods must be devised to translate those goals into practice. The research in this area will generate new ideas about the processes of imparting knowledge, attitudes, and skills to young people and adults.

III. Vocational Education for Special Populations

Particularly as demographic conditions change, a growing proportion of those needing occupational preparation will require special assistance in order to benefit fully from vocational programs. The analyses will focus not only on how existing programs for special populations can be improved, but also on more fundamental issues of how different groups are socialized for work and how they vary in their approaches to learning and schooling.

IV. The Development of Personnel in Vocational Education

In the recent "second wave" of educational reform, it has become clear that responsiveness to changing conditions is impossible without reforming the preparation of education professionals. This issue is especially important in vocational education, since the preparation of vocational teachers and administrators is so varied and policies have been so inconsistent. Research

in this issue will examine the current status of vocational teacher preparation, the nature of leadership in administration, and ways to prepare effective vocational leaders.

V. **The Delivery System of Vocational Education and Training**

Over the past three decades, vocational education and training have expanded in many institutions other than the high schools in which vocational education originated. The projects in this issue area will examine a wide variety of occupational preparation methods, concentrating especially on their relationships with high schools and community colleges and on the relative effectiveness of vocational preparation in different institutions.

VI. **Governance and Policy**

This issue area examines the status and the effectiveness of the current system of federal, state, and local policymaking in secondary and postsecondary vocational education.

I. CONTEXT, GOALS, PLANNING, AND EVALUATION

Project I.14

THE IMPLICATIONS OF PERFORMANCE-ORIENTED ASSESSMENTS FOR SECONDARY SCHOOL CURRICULUM AND TEACHING

Project Directors: Clifford Hill and Linda Darling-Hammond
Teachers College, Columbia University (Year 2 of 2)

Keywords: Integration of Vocational/Academic Education, Evaluation Utilization, Measures (Individual), Performance Factors, Evaluation Methods, Case Studies

This study is examining (1) the characteristics and uses of newly emerging "authentic" or performance-based assessments of secondary students' learning, and (2) their influences on the kinds of school tasks in which students engage and the kinds of teaching and learning experiences they encounter in vocational, academic, and integrated vocational/academic settings. Researchers will conduct case studies in three schools that are using different models as the basis for examining how these assessment practices influence the nature of curriculum, teaching, and learning.

Results of this work will be published in two NCRVE reports, one concerning models of authentic assessment and the other concerning the influences of performance-based assessment on classroom teaching. Summaries will also be prepared for wider circulation through articles for both research and practitioner readership. Results will also be conveyed to a wide variety of audiences through conference presentations.

Project I.15

THE USE OF ALTERNATIVE OUTCOME MEASURES IN POSTSECONDARY VOCATIONAL-TECHNICAL EDUCATION

Project Directors: Debra D. Bragg and Tim L. Wentling
University of Illinois (Year 2 of 2)

Keywords: Evaluation Research, Evaluation Methods, Postsecondary Education

This project seeks to ascertain the efficacy of selected alternative individual outcome measures and outcomes evaluation approaches in traditional (e.g., community colleges) and nontraditional (e.g., business/industry) postsecondary vocational-technical education settings.

Two publications will be produced: (1) a resource guidebook describing alternative outcomes evaluation and (2) a technical report describing the project's research methodology, findings, and policy recommendations. Additionally, the research findings and products will be disseminated through conference presentations and journal publications.

Project I.16

FACTORS INFLUENCING TECH PREP PLANNING AND IMPLEMENTATION

Project Director: Debra D. Bragg, University of Illinois (Year 2 of 2)

Keywords: Articulation, Federal Legislation, Educational Planning, Tech Prep, Postsecondary Education

This project describes how state and local educational agencies/institutions plan and implement the federally funded Tech Prep initiative and examines how factors influence the planning and implementation processes. The overall goal of the project is to determine the nature of changes that occur in state and local (secondary and postsecondary) vocational-technical education goals, policies, programs, services, and administrative structures related to Tech Prep.

Two publications will be produced: (1) a guide for navigating the Tech Prep planning and implementation processes and (2) a guide concerning the factors that influence the planning and implementation processes of the Tech Prep initiative. The project's research findings will be shared through refereed research journals and presentations at professional meetings.

Project I.17

INDUSTRY-ORIENTED VOCATIONAL PROGRAMS

Project Directors: Thomas Bailey, Ross Koppel, and Roger Waldinger
Teachers College, Columbia University (Year 2 of 2)

Keywords: School Business Relationship, Cooperative Programs, Case Studies

Vocational education has traditionally been organized around specific occupational classifications. This project is based on the contention that this exclusive occupational focus is increasingly out of step with current changes in the nature of work and that educational institutions need to shift away from preparation for specific occupations towards a broader industry focus—that is, an industry-oriented educational strategy.

The research examines six educational programs that prepare students for two broadly defined industries: the textiles/apparel/retail complex and the graphic arts/printing complex. The central hypothesis under study is that programs that emphasize preparation for broad industry segments (rather than specific occupations) and that maintain a balance between classroom and worksite instruction have significant advantages in preparing the students to be effective in the emerging patterns of work and production organization. Field work will be conducted at the schools and programs as well as at worksites that employ or potentially employ graduates of the programs.

The research findings, case studies, and policy implications will be disseminated via a report and short summary document. In addition, seminars and presentations will be conducted to business, industry, and labor groups as well as educators.

Project I.19

THE NATURE OF LABOR MARKETS FOR POSTSECONDARY VOCATIONAL EDUCATION

Project Director: W. Norton Grubb, University of California at Berkeley (Year 2 of 2)

Keywords: Labor Market, Job Analysis, Educational Planning, Postsecondary Education

This project investigates the nature of labor markets for which community colleges, technical institutes, and other institutions providing postsecondary vocational education prepare students. The project is developing and testing a number of alternative explanations for the role of educational institutions, using quantitative analysis where appropriate but concentrating on qualitative analysis of a subset of occupations in a number of specific labor markets.

A final report will be published.

Project I.21

AN ASSESSMENT OF LABOR MARKET DEMAND, SKILL REQUIREMENTS, AND VOCATIONAL EDUCATION NEEDS FOR ENVIRONMENTAL HAZARDOUS MATERIALS TECHNICIANS

Project Director: Paula Hudis, MPR Associates, Inc. (Year 2 of 2)

Keywords: Hazardous Materials, Labor Needs, Waste Disposal

The skills required of personnel responsible for handling and disposing of environmental hazardous materials (i.e., hazmat technicians or hazmat workers) are often highly technical and will become increasingly complex and technical in the future.

This study addresses several questions that are key to ensuring that the technically trained work force required for hazmat positions in the future is adequate in both numbers and qualifications. These inquiries fall into the following four areas:

1. Current and projected trends in labor market demand for hazmat techs including both personnel and skill requirements

2. Current and projected supply of hazmat techs including employment patterns by sector and industry and sources of education and training

3. The gap between available personnel and national needs

4. The gap between skills required and skills available

A report and a journal article will be produced assessing the labor market demand, skill requirements, and vocational education needs for environmental hazardous materials technicians.

Project I.22

BUILDING A WORK PREPARATION SYSTEM FOR MIDDLE-SKILL JOBS

Project Directors: Sue E. Berryman and Erwin Flaxman
Teachers College, Columbia University (Year 1 of 1)

Keywords: Education Work Relationship, Program Design, High Schools, Postsecondary Education

This is a synthesis project. Using NCRVE's and others' research as a base, a design for a work preparation system for middle-skill jobs for the nonbaccalaureate-bound is being developed. Innovative secondary and postsecondary vocational education programs are the school-based core of the design. The project is identifying strategies to move the system from where it is now to where it needs to go. It is a collaborative effort between project staff and all interested members of NCRVE to insure the optimum use of NCRVE's work and consensus on what the work-preparation system should look like.

Three products will be produced: (1) a technical report, (2) a nontechnical report summary, and (3) a set of briefing-chart transparencies.

II. CURRICULUM AND INSTRUCTIONAL METHODS

Project II.2

INTEGRATING VOCATIONAL AND ACADEMIC EDUCATION: A CLOSER EVALUATION

Project Director: W. Norton Grubb, University of California at Berkeley
(Year 4 of 4)

Keywords: Instructional Material Evaluation, Postsecondary Education, Evaluation Methods, Integration of Vocational/Academic Education

This project is evaluating current efforts to integrate vocational and academic education, examining alternative assessment instruments that could be used to measure success. The project also is examining several subjects related to the integration of vocational and academic education which have been relatively ignored, including integration at the postsecondary level, and the integration of vocational education with history, literature, and social science.

Five publications will be produced concerning the following topics: integration of vocational and academic education in postsecondary education; developments in assessments and implications for evaluation; the validity of curricula in applied academics; integration of occupational content into literature, civics, and social sciences; and a guide on integration for teachers and administrators. We also anticipate that papers drawn from these reports will be published in various professional journals as well as be presented at various conferences. In addition, the information generated by this project will serve as the basis for NCRVE's tec nical assistance to as well as evaluation of schools attempting new forms of integration.

Project II.4

APPLICATION OF COGNITIVE THEORY IN THE DEVELOPMENT AND DESIGN OF VOCATIONAL EDUCATION INSTRUCTION

Project Directors: Ruth G. Thomas, University of Minnesota
Scott D. Johnson, University of Illinois (Year 5 of 5)

Keywords: Instructional Design, Learning Processes, Instructional Material Evaluation, Cognitive Processes

This project is concerned with understanding how knowledge should be acquired and organized in vocational instruction in order to facilitate learners' adaptability to change, capacities for dealing with complexity, and independent learning. The project entails development of cognitive theory-based instructional design principles and models, and the development and field testing of vocational education instructional prototypes which reflect these principles and models.

Three publications will be produced concerning models of instruction, instructional prototypes, and research designs and procedures. Additionally, preliminary findings will be reported at national, state, and local conferences.

Project II.17

TEACHING AND LEARNING GENERIC SKILLS IN VOCATIONAL AND ACADEMIC CLASSROOMS

Project Director: Cathleen Stasz, RAND (Year 2 of 2)

Keywords: Basic Skills, Thinking Skills, Case Studies, Cooperative Learning, Integration of Vocational/Academic Education

This project is examining the teaching and learning of generic skills and the motivational factors that influence learning through case studies of vocational and academic classrooms. In addition, the study is examining contextual factors in the school and district that can affect classroom teaching practices.

A final report will be produced. Findings will be presented at conferences, through journal publication, and through the RAND publications distribution system.

Project II.18

IMPLICATIONS OF COGNITIVE SCIENCE RESEARCH FOR INSTRUCTIONAL PRACTICE IN VOCATIONAL EDUCATION

Project Director: Scott D. Johnson, University of Illinois (Year 2 of 2)

Keywords: Instructional Innovation, Cognitive Processes, Instructional Effectiveness

Several studies are being conducted to develop and test a variety of instructional strategies that appear to have utility for improving technical teaching and learning. The strategies are based on cognitive science's increased understanding of human performance in technical areas and the socioeconomic need to prepare workers who are good thinkers and problem solvers.

One publication will be produced, concerning implications of cognitive science research for instructional practice in vocational education. Research articles will be submitted for publication. The research results will also be disseminated through presentations at national professional association conferences.

III. VOCATIONAL EDUCATION FOR SPECIAL POPULATIONS

Project III.6

INFLUENCES ON ADOLESCENTS' CONCEPTIONS OF WORK: OCCUPATIONAL VALUES, IDENTITY, AND ASPIRATIONS

Project Director: Jeylan T. Mortimer, University of Minnesota (Year 2 of 2)

Keywords: Occupational Aspiration, Work Attitudes, High School Students, At-Risk Persons, Work Experience

This study examines the influence of work and other contexts on the vocational development of high school students, including their occupational values, identity, and aspirations. Considerable attention is directed to the intrinsic and extrinsic attributes of work, as well as stressors encountered in the work environment. Both objective features of adolescents' jobs as well as the subjective reality of work—as perceived by the adolescent—are assessed.

A report describing the influences on adolescents' occupational values, identity, and aspirations will be produced; a series of articles will be written; and the findings of the study will be disseminated at professional meetings.

Project III.7

IDENTIFICATION AND DISSEMINATION OF ARTICULATED TECH PREP PRACTICES FOR AT-RISK STUDENTS

Project Directors: James L. Hoerner and Darrel A. Clowes
Virginia Polytechnic Institute and State University (Year 2 of 2)

Keywords: Articulation, At-Risk Persons, Tech Prep, Postsecondary Education

This project concerns the transition from secondary to postsecondary education focusing on Tech Prep programs. Attention is paid to the at-risk student and the role of remediation efforts in postsecondary education institutions. In addition to completing a

review of the literature, six case studies are underway as well as an analysis of data concerning the enhancements and barriers to various patterns of instructional cooperation, remediation, and service to specific client groups.

The project will produce a guide to Tech Prep models and their implementation. In addition, the project staff will submit manuscripts to professional journals and publications addressing postsecondary education.

Project III.8

THE ROLE OF FAMILY IN EDUCATIONAL AND OCCUPATIONAL DECISIONS MADE BY MEXICAN AMERICAN STUDENTS

Project Director: Kermeta "Kay" Clayton, Texas A&I University (Year 1 of 1)

Keywords: Mexican Americans, Family Influence, Occupational Aspiration, Student Educational Objectives

This project is examining the importance of family as related to the occupational and educational aspirations and achievements of Mexican American students. Specifically, the study is analyzing the impact of familial expectations in the educational and occupational decision-making process of Mexican American students in Texas.

The final report concerning the role of family in educational and occupational decisions made by Mexican American students will be published. Articles based on the project will be submitted to appropriate journals, and a presentation will be made at AVA.

Project III.9

LEARNING THE ROPES: BASIC SKILLS FOR EMPLOYEE INDUCTION

Project Directors: Steve Reder, Northwest Regional Educational Laboratory
Mary Cross, University of California at Berkeley (Year 1 of 1)

Keywords: Organizational Climate, Informal Organization, Communication Skills, Work Environment, Minority Groups

This project is conducting in-depth research in selected work settings to identify essential literacy and communication skills required for successful induction into work settings (i.e., acquisition of the knowledge, skills, and values needed to understand those informal organizational processes and structures that lead to success and advancement). The project also is examining the extent to which secondary vocational programs provide instruction in learning the ropes and will make recommendations about ways vocational education might deliver more effective instruction in this vital area. Special emphasis is given to workplaces and schools having a high percentage of minority workers and students.

A report on the skills required to learn the ropes of a new job and/or organization will be published.

Project III.10

VOCATIONAL AND ACADEMIC DEVELOPMENT AMONG BLACK AND HISPANIC YOUTH

Project Directors: Mildred Barnes Griggs and Elaine Copeland
University of Illinois (Year 1 of 1)

Keywords: Academic Achievement, Vocational Maturity, Success, African Americans, Hispanic Americans

In the past, researchers have developed a deficit model to explain the lack of vocational and academic development among large numbers of minority youth by determining what causes failure. Using an alternative perspective, this project is identifying the factors to which *successful* Black and Hispanic youth attribute their success.

Recommendations concerning increasing the rates of vocational and academic development among minority youth will be developed.

A publication discussing these success factors and their implications for program development will be published. Related research articles will be submitted for publication to a variety of journals. The research results will also be disseminated through presentations at national professional association conferences.

IV. THE DEVELOPMENT OF PERSONNEL IN VOCATIONAL EDUCATION

Project IV.2

PROFESSIONAL DEVELOPMENT OF BEGINNING VOCATIONAL TEACHERS

Project Directors: Betty Heath-Camp and William G. Camp
Virginia Polytechnic Institute and State University (Year 5 of 5)

Keywords: Vocational Education Teachers, Beginning Teacher Induction, Demonstration Programs

This project will test, assess, revise, and disseminate a model professional development program for beginning vocational teachers developed during previous phases of the study.

Two products will be published. The first will present a model induction assistance program for beginning vocational teachers. The second will be a set of resource materials, guidelines, and inservice plans targeted to local systems and state departments of education.

Project IV.8

SCHOOL CONTEXT AND PROFESSIONAL COMMUNITY: SPECIAL TOPICS IN THE INTEGRATION OF VOCATIONAL AND ACADEMIC EDUCATION

Project Director: Judith Warren Little, University of California at Berkeley
(Year 2 of 2)

Keywords: Teaching (Occupation), Integration of Vocational/Academic Education

Through comparative analysis of data from vocational and academic teachers in comprehensive secondary schools, this project seeks to understand the possibilities and limitations of integrating vocational and academic purposes in secondary schools by examining how specific features of school context bear upon the goals teachers embrace,

the teaching assignments they value, the conceptions of curriculum that underlie their classroom practice, and the collegial affiliations they pursue.

A project report will be published. It will discuss the relationship between school context and professional community, and the integration of vocational and academic education. Conference presentations will be made. In addition, articles will be submitted to both research and policy-oriented journals.

Project IV.9

THE ROLE OF VOCATIONAL TEACHERS IN THE INTEGRATION OF VOCATIONAL AND ACADEMIC EDUCATION

Project Directors: B. June Schmidt and Curtis R. Finch
Virginia Polytechnic Institute and State University (Year 2 of 2)

Keywords: Vocational Education Teachers, Teaching Methods, Integration of Vocational/Academic Education

Synthesizing NCRVE and others' studies of models for achieving the integration of vocational and academic education, this study is extracting factors associated with the role of vocational teachers in the integration process. These factors serve as a foundation for the identification of knowledge, skills, and attitudes needed by vocational teachers who integrate vocational and academic education. Through field interviews with key players in the integration process, contexts within which integration takes place are being documented and vocational teachers' roles delineated.

Three publications will be produced. One report will be designed for use by university faculty members and researchers and will describe the role of vocational teachers in the integration of vocational and academic education. The other two products will appeal to education practitioners in local education agencies. One will present implementation guidelines for integration and the other will describe how to use professional development to facilitate integration. The study's findings will be presented at several professional meetings and will be submitted to professional jõurnals.

Project IV.10

RESOURCES FOR VOCATIONAL EDUCATION LEADERSHIP DEVELOPMENT

Project Director: Curtis R Finch, Virginia Polytechnic Institute and State University (Year 5 of 5)

Keywords: Leadership Training, Simulated Environment, Material Development, Case Studies

In this project, research-based leadership development resources are being prepared and tested in educational settings. These resources will provide leadership trainers with greater capacity to prepare and upgrade vocational education administrators in a manner that goes beyond the knowledge and application of specific tasks. This project is closely linked with NCRVE leadership development activities at the University of Minnesota (see Service Activity 4 on page 31).

Two products will be produced: (1) an interactive simulation that provides participants with opportunities to develop leadership skills in a dynamic vocational education environment and (2) a set of case studies that will provide participants with opportunities to develop leadership skills by exploring alternate actions and solutions.

V. THE DELIVERY SYSTEM OF VOCATIONAL EDUCATION AND TRAINING

Project V.10

LEARNING FROM SCHOOL-BASED WORK EXPERIENCE PROGRAMS

Project Directors: David Stern, University of California at Berkeley
Charles Hopkins, and James Stone, University of Minnesota
Martin McMillion, Virginia Polytechnic Institute and State University
(Year 5 of 5)

Keywords: Cooperative Education, Outcomes of Education, Longitudinal Studies, Work Experience, Postsecondary Education

In this five-year longitudinal study, secondary and community college students in school-supervised work experience programs, and comparable students who hold nonsupervised jobs or who are not employed, are being followed for one to three years after leaving school or college. Detailed data on quality and quantity of employment while in school is being collected. This information is being correlated with students' subsequent performance in the labor market and in further schooling.

A final report, journal articles, and presentations at regional and national professional conferences are all planned. In addition, the researchers are encouraging others in the field to use the study's questionnaires to gather data on programs other than those in the present research.

Project V.11

MAGNET VOCATIONAL SCHOOLS: ARE THEY SUCCESSFUL AND FOR WHOM?

Project Director: Robert L. Crain, Teachers College, Columbia University (Year 4 of 4)

Keywords: Vocational High Schools, Program Evaluation, Longitudinal Studies, Program Effectiveness

This project continues an evaluation of New York City's magnet career-oriented programs. The evaluation is based on a randomized experimental design made possible by the school district's use of a lottery to assign students to oversubscribed magnet programs and schools. The evaluation has looked at the ninth- and tenth-grade performance of students in the career magnet programs. The study also surveyed the curriculum of the magnet programs.

This year the study is examining the impact of these programs on students in the eleventh grade, enlarging the sample of programs and students. Finally, the project is measuring more aspects of the curriculum in each program and correlating these new curricular measures with school performance.

Three reports on the ninth-, tenth-, and eleventh-grade results will be published.

Project V.12

INSTITUTIONAL EXCELLENCE IN VOCATIONAL EDUCATION

Project Directors: George Wardlow and Gordon Swanson, University of Minnesota (Year 4 of 4)

Keywords: School Effectiveness, Educational Quality, Institutional Evaluation

This project is refining indicators of excellence previously identified by the study, with particular attention to the relationship of these to student factors. A path-model theory is under development, seeking to explain these factors' contributions to each indicator. An assessment protocol for use by institutions seeking to measure themselves against these excellence factors is being field tested. Formal relationships are fostered among participant

institutions in which excellence is clearly observable in order to determine interactions among the factors. In addition, the project is addressing the sustainability of the process of maintaining a national dialogue on the specific issue of educational excellence.

Products to be published include the written account and analysis of the process of establishing a national network of exemplary institutions. Further, an analysis of the findings of the research questions will be produced. Lastly, the network will be nurtured to continue.

Project V.16

NEW DESIGNS FOR THE COMPREHENSIVE HIGH SCHOOL

Project Director: George H. Copa, University of Minnesota (Year 2 of 2)

Keywords: Comprehensive Programs, High Schools, Program Design, Integration of Vocational/Academic Education

The overall purpose of this project is to bring together and synthesize findings from several sources—NCRVE and others—into new designs for the comprehensive (especially urban) high school as a means to enrich education for all students. Drawing on NCRVE's work which deals with integrating vocational and academic education, articulating secondary and postsecondary programs, modernizing the subject matter of vocational education, and building partnerships between schools and the wider community, new prototypes are under development. The new designs include attention to learner outcomes, the learning process, organization, partnerships, staffing, and cost. The designs are being developed in collaboration with practicing teachers, school administrators, other support staff, state education agency personnel, teacher educators, policymakers, and community representatives.

A publication concerning these new designs for high schools will be published.

Project V.17

SCHOOL-BASED ENTERPRISE: POTENTIALS AND PROBLEMS

Project Directors: Robert L. Crain, Teachers College, Columbia University
David Stern, University of California at Berkeley
Charles Hopkins and James Stone, University of Minnesota
Martin McMillion, Virginia Polytechnic Institute and State University (Year 2 of 2)

Keywords: Experiential Learning, Entrepreneurship, Postsecondary Education

School-based enterprises (SBEs) give students an opportunity to apply what they are learning in school by producing useful goods or services for other people. In spite of its appeal, SBE does not play a major role in most U.S. schools. The project investigates why SBE has not become a more central feature of U.S. high schools and two-year colleges. Case studies of successful SBEs will describe accomplishments and document obstacles and difficulties. These findings will indicate how federal, state, or local action might best facilitate the further development and spread of SBEs.

The case studies will be published, as will a report containing discussion of issues, the case studies, and relevant evidence from another NCRVE study—Project V.10, "Learning from School-Based Work Experience Programs." In addition, presentations will be made at appropriate national conferences.

Project V.19

THE CAUSES AND INTERPRETATION OF NONCOMPLETION IN POSTSECONDARY VOCATIONAL EDUCATION

Project Directors: Robert Fitzgerald, MPR Associates, Inc.
W. Norton Grubb, University of California at Berkeley
(Year 2 of 2)

Keywords: Dropout Research, Postsecondary Education

This project examines the reasons for the dramatic increase in the rate of noncompletion in postsecondary vocational education between 1972 and 1986, carefully distinguishing between changes in student composition and institutional and policy

characteristics. In a substudy, the Chancellor's Office of the California Community Colleges, local community college staff, and staff at four-year institutions' perspectives on the sources of noncompletion will be sought.

A NCRVE publication will describe the causes and interpretation of noncompletion in postsecondary education and will offer policy recommendations. All data files prepared for this research will be deposited with NCRVE's Data Library. In addition, we will prepare a series of journal articles.

The findings will be reviewed with participants in the substudy, and collaborative strategies for improving institutional effectiveness will be developed.

VI. GOVERNANCE AND POLICY

Project VI.12

POLICY FOR INTEGRATED VOCATIONAL AND ACADEMIC EDUCATION

Project Director: Susan Bodilly, RAND (Year 3 of 3)

Keywords: Policy Formation, Integration of Vocational/Academic Education

The project responds to burgeoning policy and practitioner interest in the integration of vocational and academic education. It identifies the governmental and nongovernmental factors that might enable or impede the development and implementation of integrated vocational and academic education in the coming years.

The project will produce a report that makes clear recommendations for policy improvements at the national, state, and local levels. Articles will be written for professional journals, and presentations at professional meetings will be made.

Project VI.16

ALTERNATIVE DATA SYSTEMS FOR LOCALLY BASED VOCATIONAL EDUCATION ACCOUNTABILITY

Project Director: Brian Stecher, RAND (Year 2 of 2)

Keywords: Accountability, Information Needs, Information Management, Evaluation Criteria, Evaluation Methods

In 1991, the project established criteria used to evaluate potential indicators of vocational education that meet information needs identified in the related project. With these criteria in mind, visits are being made to vocational education programs with innovative accountability mechanisms to identify and evaluate the measures they use as components of their own information systems. The project has a strong local focus because the information has greater utility, and information users have greater potential for action at the local level. The study tries to identify locally based indicators that can be

aggregated to meet the needs of national and state policymakers. Where information needs remain unmet, the project investigates alternative measures of program practice or performance that could serve as elements in a nested accountability system. Finally, the potential for constructing an integrated, nested vocational education data system is under assessment.

Two project reports will be published, one documenting guidelines for practitioners and policymakers, and the other summarizing a literature review, case studies previously conducted, and offering a policy analysis. Presentations at vocational education conferences will also be made.

PART TWO

THE SERVICE FUNCTIONS OF THE NATIONAL CENTER

In addition to research and development, NCRVE must perform various service functions for vocational educators and policymakers. The Carl D. Perkins Vocational Education Act specifies the activities which NCRVE must undertake:

- Provide leadership development.
- Provide inservice education for state and local leaders in vocational education.
- Disseminate the results of the research and development projects funded by the NCRVE.
- Provide information to facilitate national planning and policy.
- Provide technical assistance to programs serving special populations.
- Act as a clearinghouse on research, curriculum development, and personnel development.
- Work with various public agencies in developing methods of planning and evaluating programs.
- Report to Congress, the Secretary of Education, and the Secretary of Labor on joint planning and coordination under the Perkins Act and the Job Training Partnership Act.

We view these various activities as different forms of dissemination, broadly interpreted—that is, different ways of making the research and development of NCRVE useful to teachers, administrators, policymakers, and other researchers.

Several principles will guide NCRVE's service efforts. First, to the extent possible, service functions will be integrated with research programs and performed as part of the six issue areas described in Part One.

Second, the various services in general, and dissemination in particular, will be designed to integrate researchers and practitioners, rather than to keep them separate in different worlds.

Third, as a general proposition, NCRVE will attempt to build up the institutional infrastructure of vocational education through leadership development and inservice education.

Finally, the Policy Forums that will operate as part of the requirement to provide information for national planning will place high-level policymakers and practitioners in contact with each other, again facilitating the institutional linkages and informational flows necessary for the development of vocational education.

Service Activity 4

ADVANCED STUDY CENTER FOR LEADERSHIP DEVELOPMENT: FACILITATING AND EVALUATING LEADERSHIP DEVELOPMENT ACTIVITIES

Project Directors: Jerry Moss, Jr., and Gary Leske, University of Minnesota
(Year 5 of 5)

Keywords: Material Development, Leadership Training, Leadership Qualities, Administrator Effectiveness

Two service projects are being conducted by the Advanced Study Center for Leadership Development (ASCLD). This project is closely linked with NCRVE leadership development activities at Virginia Polytechnic Institute and State University (see Project IV.10 on page 21).

Seven leadership development programs for graduate students in vocational education were partially supported by the ASCLD in 1990. The ASCLD is completing an ongoing evaluation of the seven programs and disseminating the results.

The second project is beginning an evaluation of eight additional leadership development projects which received support in 1991. This set of eight programs was designed to serve practicing administrators and other leaders in vocational education.

Two reports will be published. One will cover the results of the evaluations of leadership development activities for graduate students. The other publication will cover the results of the evaluations of the leadership development programs for inservice administrators and other leaders in vocational education.

The project will also produce and distribute a summary of the findings of the evaluations to be used as a guide by institutions and agencies preparing to offer leadership development programs.

Finally, attempts will be made to further disseminate the results of the project through journal articles and at conferences.

Service Activity 6

INSERVICE EDUCATION

Project Directors: Lois A. Beeken and B. June Schmidt (Year 5 of 5)
Virginia Polytechnic Institute and State University

Keywords: Inservice Education, Professional Development, Delivery Systems, Integration of Vocational/Academic Education, Postsecondary Education, Performance Factors

The Inservice Education Project (ISEP) includes a variety of professional activities through which researchers, policymakers, and practitioners from both vocational and academic programs will have an opportunity to address vital issues in the delivery of vocational education. The following inservice activities will incorporate NCRVE research outcomes and provide opportunities for extending the knowledge and expertise of NCRVE personnel to the vocational education community:

- Preparation of the NCRVE *Calendar of Professional Activities*
- A pre-AVA session on the future preparation of vocational education teachers
- Technical assistance on integrating vocational and academic education
- A workshop for postsecondary educators on integration of vocational and academic education
- A satellite teleconference on integrating vocational and academic education (a videotape of this teleconference will be produced)
- A satellite teleconference on restructuring schools and the implications for vocational education (a videotape of this teleconference will be produced)
- A session to showcase NCRVE research on integration at the Southern Regional Education Board–Vocational Education Consortium Conference

A resource guide for integrating vocational and academic education will be published. This guide will include information to assist school personnel in integrating vocational and academic education including a list of NCRVE personnel and practitioners who have conducted research or have been associated with successful integration programs.

Dissemination of information regarding ISEP and other NCRVE inservice education activities will be a major responsibility of the ISEP staff. The primary vehicle for information will be the *Calendar of Professional Activities*, which will be produced and disseminated four times a year. ISEP staff will be responsible for the total mailing of the *Calendar* with the University of California at Berkeley providing the NCRVE mailing list. Other avenues of promotion and publicity will be *CenterWork*, direct mailings, and major education publications including AVA's *Vocational Education Journal*. On a quarterly basis, the "NCRVE Inservice Education Bulletin" will be published in the *VEJ*. This bulletin will focus on translating research outcomes into practice for staff development activities.

Service Activity 7

TECHNICAL ASSISTANCE FOR SPECIAL POPULATIONS PROGRAM

Project Director: Carolyn Maddy-Bernstein, University of Illinois (Year 5 of 5)

Keywords: Special Needs Students, High Risk Students, At-Risk Persons, Information Dissemination

The Technical Assistance for Special Populations Program (TASPP) is designed to assist in the improvement of vocational education programs for special needs youth and adults. TASPP's goals are to (1) provide targeted technical assistance on selected topics or problems crucial to improving the quality of vocational education programs provided to special populations, (2) provide comprehensive resource and referral services to persons working in secondary and postsecondary vocational education for special needs populations, and (3) initiate and support networks of professionals serving the vocational education needs of special groups.

TASPP assists professionals and practitioners in improving vocational programs and services for special populations; in conducting workshops; in publishing a newsletter, *TASPP BULLETIN*; as well as in publishing *TASPP BRIEF*s, four short research and resource papers on critical issues and policy options. In addition, TASPP staff develop materials for national distribution, including a monograph on exemplary programs identified through a formal process conducted by the project.

As it did last year, TASPP is continuing to focus its services on assisting professionals in the field to understand, implement, and comply with the Carl D. Perkins Vocational and Applied Technology Education Act of 1990.

Service Activity 8

DISSEMINATION

Project Director: Peter Seidman, University of California at Berkeley (Year 5 of 5)

Keywords: Information Dissemination, Referral, Publications

Dissemination translates research-based, practitioner-based, and policy-based knowledge in ways *useful* to users and *usable* by them, and facilitates the movement of that knowledge to these persons. The following three dissemination strategies are used:

(1) **Knowledge spread** is the one-way distribution of knowledge produced by NCRVE. NCRVE will produce approximately sixty new products. These products along with the ninety produced in NCRVE's first four years will be distributed by NCRVE. In addition, NCRVE will publish four issues of its newsletter, *CenterWork*; three issues of its research review, *Change Agent*; and a monthly column in *Education Week*. Lastly, NCRVE will produce and distribute a press kit to educational journalists.

(2) **Knowledge choice** involves assisting NCRVE's clients to access information. The major techniques used to implement this function ar an information brokerage; state and federal projects databases; an address file; an CRVE product database; and electronic communications including e-mail, discussion groups, electronic marketing, and electronic archiving.

(3) **Knowledge exchange** promotes the multiway flow of NCRVE-produced knowledge. The key implementing approaches that are used are electronic communications and links with key client groups (e.g., NNCCVTE, ERIC/ACVE, the Education Writer Association, and NAVEPI).

Service Activity 9

TECHNICAL ASSISTANCE FOR PLANNING AND EVALUATION

Project Director: Gary Hoachlander, MPR Associates, Inc. (Year 5 of 5)

Keywords: Educational Planning, Policy Formation, Technical Assistance, Data Analysis, Agency Cooperation, Cooperative Planning, Integration of Vocational/Academic Education, Program Evaluation, Minority Group Teachers, Minority Group Children, Teacher Participation, Student Participation

The technical assistance project performs four types of service activities: (1) liaison activities with national organizations such as NOICC and the National Governors Association; (2) national planning and evaluation with special attention to the implementation of performance standards and measures; (3) system management of NCRVE's mainframe computer data library, including publication of NCRVE's technical bulletin, *Data Update*; and (4) technical assistance, focusing on requests best met by using NCRVE's Data Library. In addition, consultations on planning and evaluation issues with states and regional organizations are handled through this project.

Service Activity 11

AN INFORMATION EXCHANGE ON TECH PREP PROGRAMS

Project Directors: W. Norton Grubb and Gerald Hayward, University of California at Berkeley (Year 2 of 2)

Keywords: Articulation, Information Dissemination, Tech Prep, Program Evaluation

This project will continue to examine Tech Prep programs, collecting information needed to provide technical assistance to other institutions planning such programs, as well as to the U.S. Department of Education as they implement the Tech Prep Education Act of 1990. A guide to assist practitioners in the process of planning, implementing, and evaluating Tech Prep programs will be produced.

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(Descriptors from the *Thesaurus of ERIC Descriptors—12th Edition—1990* comprise the majority of phrases used as **keywords** in this publication. NCRVE staff hope that this procedure extends the usefulness and usability of *The 1992 Agenda*.)

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